

CLAIMS:

1. An optical system comprising a fluid chamber, the fluid chamber comprising a first fluid, wherein the optical system comprises a birefringent part which is capable of varying characteristics of a first radiation beam and a second radiation beam, the first and second radiation beams having different polarisations, characterised in that:
 - 5 - the fluid chamber contains a second fluid, the first and second fluids having different indices of refraction and the interface between the fluids forming a meniscus; and
 - the birefringent part is arranged such that a variation in the configuration of the meniscus causes said variation in the characteristics of the first radiation beam and the second radiation beam.
- 10 2. The optical system of claim 1, wherein the fluid chamber comprises a first electrode separated from the fluids by a fluid contact layer, and a contact electrode in conductive communication with or capacitively coupled to one of the fluids, wherein the fluid contact layer has a wettability by one of the fluids that varies according to a voltage
- 15 between the electrodes, such that the configuration of the meniscus varies in dependence on said voltage.
3. The optical system of claim 1 or claim 2, wherein the first fluid comprises the birefringent part.
- 20 4. The optical system of claim 3, wherein the first fluid comprises liquid crystal molecules, and wherein the fluid chamber comprises an alignment layer, the alignment layer being operable to align the liquid crystal molecules, wherein the alignment layer is arranged in the fluid chamber opposite the meniscus.
- 25 5. The optical system of any preceding claim, wherein the fluid chamber is arranged to produce a plurality of different meniscus configurations, in which the meniscus forms a substantially planar interface between the first and second fluids.

6. The optical system of any of claims 1 to 4, wherein the fluid chamber is arranged to produce a plurality of different meniscus configurations, in which the meniscus forms a curved interface between the first and second fluids.
- 5 7. The optical system of claim 1 or claim 2, wherein the birefringent part is formed from a solid material.
8. The optical system of claim 7, wherein the birefringent part has a refractive surface which is substantially planar, and the fluid chamber is arranged to produce a plurality
10 of different meniscus configurations, in which the meniscus is substantially planar.
9. The optical system of claim 7, wherein the birefringent part has a refractive surface which is curved, and the fluid chamber is arranged to produce a plurality of different meniscus configurations, in which the meniscus is curved.
- 15 10. An optical scanning device for scanning an optical record carrier, comprising an optical system according to any preceding claim, wherein the meniscus is configurable to correct for aberrations arising during the scanning of different information data storage layers depths in the optical record carrier.
- 20 11. An optical microscopy device comprising an optical system according to any of claims 1 to 9, wherein the optical system is arranged such that the first and second radiation beams are focussed onto a three dimensional sample via an objective lens to produce an output image, wherein the optical system is operable to vary the configuration of
25 the meniscus to vary the contrast of the output image.